

IN THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application. Please amend the claims as follows:

Listing of Claims:

1-21 (canceled)

22. (presently amended) A system Apparatus for treating patients suffering from movement disorder, comprising

~~a pulse generator sanctioned by government authority for implantation in a patient together with electrode means to treat said disorder by stimulation of a selected cranial nerve of the patient with~~ capable of generating a predetermined sequence of electrical impulses ~~from said pulse generator pulses, and~~

at least one electrode electrically coupled to the pulse generator, said electrode being implanted in the patient's body and coupled to a vagus nerve of the patient ~~applied to the selected cranial nerve~~ at a location in a range from about two to about three inches above or below the patient's diaphragm, for alleviating symptoms of the movement disorder in the patient.

23. (presently amended) The ~~apparatus~~ system of claim 22, wherein said pulse generator is programmable to enable physician programming of ~~the electrical and timing~~ a plurality of parameters defining ~~of~~ said sequence of electrical ~~impulses~~ pulses.

24. (presently amended) The ~~apparatus~~ system of claim 22, wherein the ~~selected cranial nerve is the vagus nerve, and said electrode means comprises~~ at least one ~~nerve~~ electrode ~~for implantation on~~ is attached to the patient's vagus nerve for direct stimulation thereof ~~at said location~~.

25. (presently amended) The ~~apparatus~~ system of claim 24, wherein said at least one electrode ~~means~~ comprises a pair of ~~nerve~~ electrodes for implantation ~~of on~~ a respective one

of ~~said pair on~~ the left and right branches of the patient's vagus nerve for direct ~~bilateral~~ stimulation thereof at said location.

26. (presently amended) The ~~apparatus~~ system of claim 22, wherein said at least one electrode ~~means comprises at least one electrode for implantation internally~~ is attached to a portion of the patient's ~~nervous system~~ body remote from the ~~selected cranial~~ vagus nerve to indirectly stimulate the vagus nerve ~~selected cranial nerve in the vicinity of said location~~.

27. (presently amended) The ~~apparatus~~ system of claim 22, further including
a sensor for sensing the patient's body movement, and
a sense signal analysis circuit ~~associated with the pulse generator~~ for analyzing a signal produced ~~by a~~ by the sensor, for determining in response to movement of the patient to assess whether the patient's movement is ~~random, uncoordinated and an~~ involuntary movement characteristic of the movement disorder being treated, and ~~, if it is,~~ for activating the pulse generator to stimulate the vagus nerve if the movement is determined to be such an involuntary movement ~~selected cranial nerve in the vicinity of said location~~.

28. (presently amended) The ~~apparatus~~ system of claim 22, including activation means associated with the pulse generator for enabling patient activation of the pulse generator to stimulate the vagus nerve ~~selected cranial nerve in the vicinity of said location~~.

29. (presently amended) Apparatus for treating patients suffering from movement disorder, comprising

a pulse generator ~~approved by a government agency of competent authority to be implanted with~~ capable of generating an electrical signal; and

at least one ~~interconnected nerve~~ electrode implanted in a patient to treat said movement disorder by applying ~~a programmed sequence of the~~ electrical ~~impulses~~ signal generated by said pulse generator to ~~a branch of the patient's vagus nerve, via said electrode~~ wherein said at least one electrode is coupled to said pulse generator and is attached to ~~implanted on~~ said vagus nerve at a location in a range from about two to about three inches above or below the patient's diaphragm, for relieving symptoms of the movement disorder in the patient.

30. (presently amended) The apparatus of claim 29, wherein said pulse generator is adapted to be programmed by a physician to provide electrical ~~and timing~~ parameters of ~~said impulses~~ defining said electrical signal.

31. (presently amended) The apparatus of claim 29, further comprising an electrical lead coupled to said at least one electrode and having ~~wherein said electrode means~~ has a length sufficient to enable said nerve at least one electrode to be implanted on attached to said vagus nerve at said location.

32. (new) The apparatus of claim 29, further comprising a programming unit coupled to said pulse generator for programming a plurality of parameters to define said electrical signal.

33. (new) The apparatus of claim 32, wherein said pulse generator is implanted in the body of the patient and said programming unit is external to the patient's body and wirelessly coupled to said pulse generator.

34. (new) A system for treating a patient having a movement disorder comprising:
a pulse generator capable of generating an electrical signal;
at least one implanted electrode, coupled to the pulse generator and attached to a vagus nerve of the patient at a location below the patient's diaphragm, for applying said electrical signal to said vagus nerve to treat said movement disorder; and
a programming unit for programming said pulse generator to define said electrical signal.

35. (new) The system of claim 34 wherein said pulse generator is implanted in the body of the patient.

36. (new) The system of claim 34 wherein said pulse generator is external to the body of the patient and is wirelessly coupled to said at least one electrode.

37. (new) The system of claim 34 wherein said programming unit is capable of programming at least one parameter selected from the group consisting of current magnitude, frequency, pulse width, on-time and off-time.